

## REMARKS

1. The Examiner has issued a restriction requirement, dividing the claims as filed into six groups, and requiring Applicants to elect one of the groups. Applicants elect Invention Group II, Claims 37-46, with traverse.

2. The Examiner has distinguished Invention Group I from Invention Group II by stating that the groups are unrelated in that they have different modes of operation. The example given is that Invention I operates as an optical mode transformer with certain properties, while Invention II operates as an optical waveguide having a non-cylindrical core and graded index properties. Claim 1, from Group I, claims an optical mode transformer comprising upper, side, and lower waveguide cladding, and a waveguide core having a vertical taper, with certain functional limitations. Thus, Claim 1 is seen to comprise a waveguide that acts in a certain way.

Claim 37, of Invention Group II, claims an optical waveguide with a non-cylindrical core. A non-cylindrical core can be a core with a vertical taper. Nothing in the restriction requirement shows that Invention Group II cannot be used as an optical mode transformer. Nothing in the restriction shows that Invention Group I, whose embodiments are primarily a waveguide, cannot also be used as a waveguide.

The Examiner's reasoning is thus overcome, and the restriction as between Groups I and II is therefore improper. The basis for the restriction has been obviated and the Office Action has failed to make a prima facie case for distinctness as between Groups I and II. Applicants request the Examiner to withdraw the restriction requirement as between Groups I and II.

3. The restriction has distinguished Invention Group II from Invention Group V by stating that the groups are related as process of making and process and product made. The restriction states that invention II can be made by a different method step process, such as having different etching, depositing, and photo-resist steps. The restriction is proper if the examiner can demonstrate that the product as claimed can be made by another *materially different* process. M.P.E.P. 806.05 (f) (emphasis added).

Claim 77 of Invention Group V claims a process whose steps include etching, depositing, and applying and exposing a photomask to radiation. The process proposed by the examiner, "different etching, depositing, and photo-resist steps," does not specify any different steps and thus is not materially different from the process claimed.

The Examiner's reasoning is thus overcome, and the restriction as between Groups II and V is therefore improper. The basis for the restriction has been obviated and the Office Action has failed to make a prima facie case for the distinctness as between Groups II and V. Applicants request the Examiner to withdraw the restriction requirement as between Groups II and V.

This same reasoning applies to the restrictions between Groups I and IV, I and V, Groups I and VI, Groups II and IV, Groups II and VI, and Groups III and IV, Groups III and V, and Groups III and VI. The Examiner is requested to withdraw all restriction requirements between these groups, Groups I II, III, IV, V and VI.

4. The restriction has distinguished Invention Group I from Invention Group III by stating that the groups are related as subcombinations that were disclosed as usable together in a single combination. The restriction notice states that the subcombinations may be distinct if they are shown to be separately usable. The restriction notice then states that Group III may be used as an optical device having refractive index distributions that vary in the x-coordinate and y-coordinate, in the respective cladding layers, causing different propagating utilities.

Invention Group I is an optical mode transformer, while Invention Group III is an optical device having refractive index distributions, as stated. The restriction does not state or show that the two were disclosed as usable together in a single combination. The requirement is not that the two are usable together, but that they are "disclosed as usable together in a single combination." M.P.E.P. 806.05(d). The restriction requirement does not show that the two are so disclosed, and the restriction requirement is therefore improper.

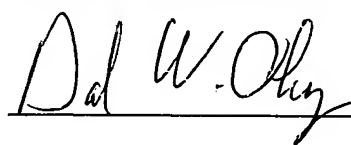
Accordingly, the Examiner is requested to withdraw the restriction requirement as between Groups I and III.

5. The restriction has distinguished Invention Group IV from Invention Group V by stating that the groups are related as subcombinations that were disclosed as usable together in a single combination. The restriction notice states that the subcombinations may be distinct if they are shown to be separately usable. The restriction notice then states that Group IV has separate utility such as for a method of fabricating a tapered optical waveguide including steps having a mask having a gray-scale, while Group V has separate utility of forming an optical waveguide with refractive index distributions in a plurality of dimensions, using a mask having a stripe.

The restriction does not state or show that the two were disclosed as usable together in a single combination. The requirement is not that the two are usable together, but that they are "disclosed as usable together in a single combination." M.P.E.P. 806.05(d). The restriction requirement does not show that the two are so disclosed, and the restriction requirement is therefore improper. Accordingly, the Examiner is requested to withdraw the restriction requirement as between Groups IV and V.

6. The Examiner is respectfully requested to withdraw the restriction requirement and to examine all the claims. The Examiner is requested to hold in abeyance the necessary corrections to Claims 27 and 28, until the undersigned has had a chance to consult with the client on the proper dependency.

Respectfully submitted,

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David W. Okey  
Registration No. 42,959  
Attorneys for Applicant

BRINKS HOFER GILSON & LIONE  
P.O. BOX 10395  
CHICAGO, ILLINOIS 60610  
(312) 321-4200